

Notice of Allowability

Application No.

09/702,462

Applicant(s)

DAVIS ET AL.

Examiner

Art Unit

David J. Huisman

2183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed on 10 September 2004.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☒ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892) •
2. ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) •
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Indranil Chowdhury on September 22, 2004. The application has been amended as follows:

Amendments to the Title

2. Please change the title to: "Microprocessor With An Instruction Sequentially Adjacent To A Branch Instruction For Calculating A Return Address And Specifying A Number Of Delay Slot NOPs To Be Executed".

Amendments to the Drawings

3. Please label Fig. 6C "Prior Art".

Amendments to the Claims

4. Referring to claim 1:

In line 5, replace "one or more delay slots" with --a plurality of delay slots--.

In line 9, replace "one or more delay slots" with --plurality of delay slots--.

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5. Referring to claim 5, replace “wherein the second instruction is executed before executing the first instruction” with --wherein the second instruction is finished executing before the first instruction is finished executing--.

6. Referring to claim 8, replace “the one or more delay slots” with --the plurality of delay slots--.

7. Referring to claim 9:

In lines 8-9, replace “one or more delay slots” with --a plurality of delay slots--.

In line 11, replace “one or more delay slots” with --plurality of delay slots--.

8. Referring to claim 15:

In line 4, replace “one or more delay slots” with --a plurality of delay slots--.

In line 8, replace “one or more delay slots” with --plurality of delay slots--.

9. Referring to claim 18:

In lines 7-8, replace “one or more delay slots” with --a plurality of delay slots--.

In line 10, replace “one or more delay slots” with --plurality of delay slots--.

Drawings

10. The application having been allowed, formal drawings are now required. See the attached Draftsperson’s Drawing Notice.

REASONS FOR ALLOWANCE

11. The following is an examiner’s statement of reasons for allowance:

Goebel, U.S. Patent No. 6,131,188, has taught a system in which a return address is

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calculated by an instruction which executes in **the** delay slot of a branch instruction. See column 6, line 54, to column 7, line 6.

Perets et al., U.S. Patent No. 6,564,316, has taught the concept of an instruction which specifies the number of delay slots that should be filled with NOPs.

The examiner has found no motivation to combine Goebel and Perets to realize applicants' invention. In fact, these two references could not be combined to realize applicants' invention because Goebel discloses a single delay slot (by using the words "the delay slot"). This one delay slot is filled by an instruction that calculates a return address. Consequently, since there is only a single delay slot, there is no reason to have the return address-calculating instruction specify an amount of NOPs to fill the remaining unfilled delay slots because there are no additional unfilled delay slots in Goebel.

Consequently, Goebel, Perets, and the additional prior art of record fail to teach or suggest, individually or in combination, a return address-calculating instruction, along with all other respectively disclosed claim limitations, which executes in one of a plurality of delay slots of a branch instruction, wherein the return address-calculating instruction also specifies a number of NOP instructions to execute in any unfilled delay slots of the plurality of delay slots.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Huisman whose telephone number is (703) 305-7811. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan can be reached on (703) 305-9712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DJH
David J. Huisman
October 7, 2004



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